UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF TEXAS
HOUSTON DIVISION

AMERICAN PILEDRIVING EQUIPMENT, INC.,	}	
Plaintiff,	}	
VS.	}	CIVIL ACTION NO. H-08-1253
J & G SALES, INC., *et al*,	}	
Defendants.	}	

MEMORANDUM ON CLAIM CONSTRUCTION

This patent case is before the Court for construction of the disputed claim terms in United States Patent No. 5,355,964 (the '964 Patent). The Court conducted a hearing pursuant to *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 390 (1996), (the *Markman* Hearing) on September 4, 2008. Upon review and consideration of the evidence before the Court, the arguments presented by counsel at the *Markman* Hearing,[1] and the controlling legal authority, the Court issues this Memorandum on Claim Construction.

I. Background & Relevant Facts

Plaintiff American Piledriving Equipment, Inc. ("APE") brings suit for patent infringement against Defendant J&G Sales, Inc. ("J&G") for infringement of the '964 Patent. The Background and Relevant Facts section of this opinion is based upon

[1] The transcript of the *Markman* hearing is Document 44

the facts set forth in the '964 Patent, Doc 26, Exhibit A[2] and the arguments made at the *Markman* hearing, contained in the transcript of that hearing.

A. Background Technology

In the construction of buildings, piles made of wood, cement, or steel are driven into the ground for foundational support. From Roman times driving piles was accomplished by pounding upon them with a heavy impacting tool that literally drove them into the ground. This technique had drawbacks, such as damage to the pile or setting the pile at an undesired angle.

Around the 1930's a vibratory pile driver/extractor was introduced. Instead of forcing the pile down by pounding upon it, vibratory pile drivers use rotation of eccentric weight to generate dynamic forces. If a weight is balanced there is no vibration, but if a weight is not balanced, its rotation will create vibration. In a vibratory pile driver a clamping device is attached to the pile. Within the clamp is a series of rotating counterweights with eccentric moment, which causes vibration upon rotation. Eccentric moment is so called because the weight being rotated is eccentric or uneven because the center of gravity for the weight is radially outward from the axis of rotation. Furthermore, the vibratory pile driver uses two or more even sets of counterweights whereby as one set flings its off-set weight sideways one way, the other does so the other way. The result is that net vibration is only up and down. Substantial challenges to operation of such vibratory devices have been the stress loads and friction heat created around the counterweights as they rotate.

[2] All references to the '964 Patent can be found in the Plaintiff's Opening Claim Construction Brief, Doc. 26, Exhibit A, 4:08cv01253, 27-2.

The prior art suffered because of these challenges. For example, in one prior art, a solid eccentric weight was bolted to an even cylindrical gear. The gear is that part of the assembly that engages with the engine that provides the drive to cause rotation. Due to centrifugal forces created upon rotation, the eccentric weight had a tendency to break off from the cylindrical gear. In an attempt to solve this problem, another prior art cast the eccentric weight and cylindrical gear of one-piece. These counterweights, however, created insufficient eccentric moment because not enough mass was rotating eccentrically; the greater the mass rotating eccentrically, the more vibratory force being generated.

In order to increase eccentric mass, holes were machined into the eccentric weight and lead was inserted; lead is highly dense and adds mass without increasing the size of the vibratory assembly to impractical dimensions. Lead, however, causes a host of other problems. Multiple counterweights must counter-act each other when the eccentric moment is lateral as oppose to vertical, in order that force only be applied downwards and upwards, keeping the pile straight. Lead liquefies under the friction generated by rotating the counterweights causing uneven weight distribution. It is also difficult to measure exact quantities of lead for insertion.

B. The ‘964 Patent.

On October 18, 1994, the ‘964 Patent was issued to John White (“patentee”), president of APE. This new invention set forth claims for inserts adding to the eccentric moment of the counterweights made of a metal with a melting point of 328 Celsius or greater. This ruled out lead, as lead melts at 328 Celsius, but the invention claimed more

specifically tungsten as the metal of choice. Tungsten is a dense metal with a melting point considerably higher than 328 Celsius.

There are four remaining claim terms, found variously in disputed claims 1, 2, 3, 4, 6, 7, 8, 9, 10, 11, 12, 13, 14, 6, 17, and 18, and repeated throughout the patent, that are at issue in this claim construction.[3] These terms all refer to the structure of the counterweights. The disputed claim terms and the parties' positions are set forth in the following chart, derived from Plaintiff's Opening Claim Construction Brief, Doc. 26 and Defendant's Responsive Claim Construction Brief, Doc. 27.

Disputed Claim Term from the '964 Patent	**APE's Proposed Interpretation**	**J&G's Proposed Interpretation**
. . . counterweight having a **cylindrical gear portion** and an **eccentric gear portion integral** with said **cylindrical gear portion** . . .	The counterweight has a cylindrical gear portion (a toothed wheel) and an eccentric weight portion (an off-set weight). The eccentric weight portion and the cylindrical gear portion act together (*i.e.*, integral with each other) as the counterweight. **Cylindrical gear portion** – AGREED: "The 'gear portion' of the counterweight is a substantially cylindrical portion and has a rear face, a front face, and a plurality of gear teeth around its perimeter." **Eccentric weight portion** – is that portion of the counterweight that contributes to the eccentric moment of the counterweight. The portion is part of the whole counterweight, but need not be a separate component piece or part.	The counterweight has a cylindrical gear portion (a toothed wheel have a rear face and a forward face) and an eccentric weight portion (an off-set weight extending forward from the forward face of the gear portion). The eccentric weight portion and the cylindrical gear portion are formed of one-piece (*i.e.*, integral with). **Cylindrical gear portion** – AGREED: "The 'gear portion' of the counterweight is a substantially cylindrical portion and has a rear face, a front face, and a plurality of gear teeth around its perimeter." **Eccentric weight portion** – The eccentric weight portion is the portion of the counterweight that extends forward from the front face of the gear portion as defined in the specification.

[3] At the *Markman* hearing the parties agreed that the term "cylindrical gear portion," previously in dispute, should be construed as follows, "The 'gear portion' of the counterweight is a substantially cylindrical portion and has a rear face, a front face, and a plurality of gear teeth around its perimeter." Doc.41, at 2

	Integral – means composed of portions, parts, or pieces that together constitute the whole. The portions act together to function as the counterweight.	**Integral** – formed or cast of one-piece.
Said eccentric weight portion having at least one **insert-receiving area** formed therein	The eccentric weight portion has one or more areas for receiving an insert. This area is formed in the eccentric weight portion. **Insert-receiving area** – is a region of the eccentric weight portion that is capable of receiving an insert, as opposed to receiving material poured into the region.	The eccentric weight portion has one or more areas formed fully therethrough for receiving an insert, as opposed to the one or more areas formed fully through the gear portion. **Insert-receiving area** – an area extending fully through either the gear portion or the eccentric weight portion and shaped to receive the solid insert. Both the gear portion and the eccentric weight portion have an insert receiving area. This limitation defines the insert receiving area as the insert receiving area of the eccentric weight portion as opposed to the insert-receiving area of the gear portion.
An eccentric weight portion **connected to** said cylindrical gear portion at a position radially outward of the axis of said cylindrical gear portion	An eccentric weight portion (an off-set weight) is connected to the cylindrical gear portion so that it extends radially outward firm the axis of the cylindrical gear portion **Connected to** – means joined together, united or linked. In this instance, the eccentric weight portion is joined with the cylindrical gear portion at a point radially outward of the axis of the cylindrical gear portion. "Connected to" can mean that the two portions are separate pieces joined together so long as that connection is at a position radially outward of the axis.	The eccentric weight portion (the portion of the counterweight assembly that extends forward from a forward face of the gear portion) is connected to the front face of the cylindrical gear portion at a position radially outward of the axis of the cylindrical gear portion. **Connected to** – means formed of one-piece and specifically excludes bolting as the '964 patent teaches that prior art having bolted counterweights are not sufficiently durable and the '964 patent does not provide any other methods of "connected to" other than casting from one-piece.

II. Legal Standard on Claim Construction

Under *Markman v. Westview Instruments*, it falls to a district court to construe the scope and meaning of the patent claims. 517 U.S. 370, 390 (1996). "It is well-settled that, in interpreting an asserted claim, the court should look first to the intrinsic evidence of record, i.e., the patent itself, including the claims, the specification and, if in evidence, the prosecution history." *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996) (citing *Markman*, 52 F.3d at 979). "The words of a claim 'are generally given their ordinary and customary meaning.'" *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (*en banc*) (*quoting Vitronics*, 90 F.3d at 1582). "The ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application." *Phillips*, 415 F.3d. at 1313. This "person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification." *Id.* "When claim construction is required, claims are construable . . . in light of the specification." *Sjolund v. Musland*, 847 F.2d 1573, 1581 (Fed. Cir. 1988). However, "it does not follow that limitations from the specification may be read into the claims." *Id.* Moreover, "particular embodiments appearing in the specification will not generally be read into the claims . . . . What is patented is not restricted to the examples, but is defined by the words in the claims if those claims are supported by the specification in the manner required by 35 U.S.C. Sec. 112." *Specialty Composites v. Cabot Corp.*, 845 F.2d 981, 987 (Fed. Cir.1988) (citations omitted).

For certain claim terms, "the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words." *Phillips*, 415 F.3d at 1314 (*citing Brown v. 3M*, 265 F.3d 1349, 1352 (Fed. Cir. 2001)). For other claim terms, however, the meaning of the claim language may be less apparent. To construe those terms, the court considers "'those sources available to the public that show what a person of skill in the art would have understood disputed claim language to mean . . . [including] the words of the claims themselves, the remainder of the specification, the prosecution history, and extrinsic evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art.'" *Id.* (*quoting Innova/Pure Water, Inc. v. Safari Water Filtration Systems, Inc.*, 381 F.3d 1111, 1116 (Fed. Cir. 2004)).

The court may also consider "extrinsic evidence, which 'consists of all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises.'" *Phillips*, 415 F.3d at 1317 (*quoting Markman*, 52 F.3d at 980). Although extrinsic evidence may assist the court in claim construction, it is "less significant than the intrinsic record in determining the legally operative meaning of claim language." *Id.* (internal quotations and citation omitted). As such, extrinsic evidence should be "considered in the context of the intrinsic evidence." *Phillips*, 415 F.3d at 1319.

It is also recognized that a patentee is free to be his own lexicographer. *Markman*, 52 F.3d at 980. "The caveat is that any special definition given to a word must be clearly defined in the specification." *Id.* (*citing Intelicall, Inc. v. Phonometrics, Inc.*,

952 F.2d 1384, 1388 (Fed. Cir. 1992)). Generally, when the specification reveals a special definition given to a claim term by the patentee that differs from the meaning it would otherwise possess, then the inventor's lexicography governs. *Phillips*, 415 F.3d at 1316 (*citing CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366 (Fed. Cir. 2002)).

APE has filed patent infringement cases in a number of jurisdictions against other defendants.[4] Shortly before the *Markman* hearing in the instant case the Honorable Phyllis J. Hamilton, United States District Judge for the Northern District of California filed the first claim construction order issued in any of the related cases and construed the same disputed terms of the '964 patent at issue here. *American Piledriving Equipment, Inc. v. Bay Machinery Corporation*, 632 F.Supp2d 956 (N.D.Cal. 2009) J&E urged this Court in a cover letter to Judge Hamilton's opinion to give Judge Hamilton's claim construction "'reasoned deference' under the goal of interjurisdictional uniformity." Doc. 41 at page 1. Since Judge Hamilton's construction four other cases, also cited in footnote four, have construed the disputed terms. Two of the terms, "cylindrical gear portion"[5]and "connected to" have been uniformly construed by all five of the courts. The remaining terms, "eccentric weight portion," "integral," and "insert-receiving area" have been variously construed by these five courts. This Court has read and considered the

[4] Five of these cases have construed the disputed terms at issue here. *American Piledriving Equipment, Inc. v. Pile Equipment, Inc.* No. 3:08cv-00659-J-25TEM (M.D.Fla., February 25, 2010); *American Piledriving Equipment, Inc. v. Geoquip, Inc.*, No. 2:08 cv547, 2009 WL 4840101 (E.D. Va. December 11, 2009); *American Piledriving Equipment, Inc. v. Equipment Corporation of America*, No. 2:08cv895, 2009 WL 3401726 (W.D. Pa. Oct. 20, 2009 (adopting Report and Recommendation); *American Piledriving Equipment, Inc. v. Hydraulic Power Systems, Inc.*, No. C08-537RSM, 2009 WL 3297311 (W.D. Wash. October 14, 2009); *American Piledriving Equipment, Inc. v. Bay Machinery Corporation*, 632 F. Supp. 2d 956 (N.D.Cal. 2009).

[5] During Judge Hamilton's *Markman* hearing the parties agreed upon the construction of "cylindrical gear portion" and continued to agree on that construction in the other cases.

constructions of the terms by all five Courts, but can defer for the goal of inter-jurisdictional uniformity only to the constructions of "cylindrical gear portion" and "connected to."

III. Construction of Claim Terms

The claims set forth substantially similar language in discussing the disputed terms. Where this is not the case, the Court will address the specific language at issue.

a. Eccentric Weight Portion

APE maintains that "eccentric weight portion" in the claim language, given its "ordinary and customary meaning," refers to "that portion of the counterweight that contributes to the eccentric moment (i.e., it 'position[s] the center of gravity of the counterweight 40 radially away from its rotational axis' which creates eccentric moment)." Doc. 31, at 7, quoting '964 Patent, col. 3, ll 49-51. In other words, the term "eccentric weight" modifies the term "portion." "Eccentric weight portion" is defined, as is "cylindrical gear portion," by its purpose: just as the cylindrical gear portion is whatever portion of the counterweight that serves as a "substantially cylindrical" gear, the eccentric weight portion is whatever portion that serves to shift the centre of gravity radially outward from the axis of rotation of the counterweight.

J&G, on the other hand, argues for a delimited structural definition of the two terms that makes them definitely distinct: the cylindrical gear portion is the cylindrical gear structure and the eccentric weight portion is that structure extending forward from the front face of the cylindrical gear portion. Under J&G's definition, the

claims set out that where one portion ends the other begins. Under APE's definition, it is possible for the two definitions to describe shared volume.

J&G first focuses upon the specification, which describes the "eccentric weight portion" as "[that] portion of the counterweight, which is formed integral with the gear portion, [and] *extends forward from the front face* of the gear portion." '964 Patent, col. 3, ll 49-51 (emphasis added). APE argues that the claim language nowhere requires the eccentric weight portion to protrude from the front face of the gear portion, and that the description in the specification is that of a preferred embodiment that does not limit the claims. *Cf. Specialty Composites*, 845 F. 2d at 987 ("[P]articular embodiments appearing in the specification will not generally be read into the claims.")

J&G counters that the language of the specification cannot be disregarded in the claim construction, but APE points out that the patent gives notice[6] that the specification describes a preferred embodiment of the invention and references five drawings (Figures 1, 2, 3A, 3B, and 4) of the preferred embodiment. '964 Patent, col. 3, ll 9-25. Because a description of the preferred embodiment in a specification cannot limit the patent claim, the language in the specification requiring the eccentric weight portion to protrude from the front face of the gear portion cannot be read into the claim. *Electro Med. Sys., S.A. v. Cooper Life Sciences, Inc*., 34 F.3d 1048, 1054 (Fed. Cir. 1994). J&G argues that within the detailed description, which is illustrated by the drawings, the descriptive language going before Col 5, line 26 are not of the preferred embodiment, but of the invention. Doc. 27 at 11. It is only on line 26 that the description recites, "In the preferred embodiment. . . ." J&G argues that it is only the language following this

[6] "The present invention will be more clearly understood from the following detailed description of the preferred embodiment taken in conjunction with the attached drawings." '964 Patent, col. 3, ll 9-12.

specific statement that describes the preferred embodiment. J&G's assertions, first, ignore the language of column 3 that specifically states that the following detailed description is of the preferred embodiment, and second, would have the Court construe the broad claim of the patent as the precise language of the specification. Such a construction would unduly read limitations in the specifications onto the claims. *Phillips*, 415 F3d at 1323. The Federal Circuit in *Andersen Corp. v. Fiber Composites, LLC*, 474 F.3d 1361, 1373 (Fed. Cir. 2007) compared the district court's task in distinguishing between reading the claims of a patent in light of the specification and improperly reading in a limitation from the specification to walking a tightrope. Given the fact that the Court's job in drawing the line between construing terms and importing limitations can be aided by focusing upon "understanding how a person of ordinary skill in the art would understand the claim terms" *Phillips*, 415 F.3d at 1323. *Phillips* goes on to point out that persons of ordinary skill in the art "rarely would confine their definition of terms to the exact representations depicted in the embodiments." *Id.*

APE also points to a rule of patent construction, which holds that two differently named elements may contain a common structure if at least some structure is different. Faber, *Landis Mechanics of Patent Claim Drafting*, Sec. 21 (4th ed. 1999). The claims' language does not preclude the cylindrical gear portion and the eccentric weight portion from having common structure, and the specification describes the gear portion as having structure that contributes to the dynamic forces, that is, eccentric moment, generated upon rotation of the gear portion about its rotational axis. '964 Patent, col. 5, ll 53-60. That structure of the gear portion, under the laws of physics, is an eccentric weight. APE argues that it follows that "even if no further weight were added to the

counterweight," be it weight extending outward from the front face of the gear portion or weight from heavy metal inserts, "the counterweight would still contain an eccentric weight portion because the structure of the gear portion would contribute to moving the center of gravity of the counterweight radially away from its axis of rotation." Doc 26 at 9.

J&G argues that APE's assertion that "under the law of physics these apertures or cavities makes [sic] the cylindrical gear portion eccentric and eliminates [sic] the need for an 'eccentric weight portion' that extends forward from the front face of the gear portion," is contrary to law. Doc 27, at 13, *referencing* Doc 26 at 9. It is contrary to law, J&G argues, because the law grants the patentee a license to be his own lexicographer, and, as his own lexicographer, he can define a term through the specifications and the arguments made in the file history. Citing the file history at Reexamination Control No. 90/007,337 for U.S. Patent No. 3,355,964 File History—June 6, 2006 Reply to Office Action, page 4, attached at Exhibit A to Doc 27, J&E argues that APE made arguments to the Patent Office that prevent the volume rearward of the front face as being construed as the eccentric weight portion. *Hockerson-Halberstad, Inc. v. Avia Group Int'l, Inc.* 222 F.3d 951,956 (Fed. Cir. 2000) ("[S]tatements made during prosecution commit the inventor to a particular meaning of a claim term that is binding during litigation," citing *CVI/Beta Ventures, Inc. v. Tura LP*, 112 F.3d 1146, 1158 (Fed. Cir. 1997)). Doc. 27 at 14.

When the '964 Patent was re-examined, the examiner issued a rejection of APE's application based on U.S. Patent No. 3,224,514 (Hornstein et al.). This patent disclosed four rotors geared together with each rotor having ten cavities. The three

cavities on the bottom of each rotor could receive tungsten inserts, thus creating an eccentrically weighted gear for pile driving. J&G argues that in order to distinguish APE's application over the Hornstein Patent, APE responded to the rejection with a statement of the intended meaning for "eccentric weight portion."

> As best seen in FIGS 3A and 3B,. . .[t]he eccentric weight portion 43 of the counterweight 40, which is formed integral with the gear portion 41, **extends forward from the front face 96 of the gear portion**. . . .In the preferred embodiment, the eccentric weight portion 43 has a substantially semi-cylindrical portion 100, and the bottom portion 104 constitutes over one-half of the area of gear portion 41. Accordingly, the counterweight 40 has a large mass of material integral to **and projecting from the bottom portion 104 of the gear portion 41. . . .**
>
> Reexamination Control No. 90/007,337 for U.S. Patent No. 5355,964 File History—June 6, 2006 Reply to Office Action, page 4 (Attached as Exhibit A ("Ex.A')) (emphasis added)

Doc 27, at 15

J&G argues that APE's argument implies "that Hornstein's tungsten inserts were only in the gear, and because these gears did not include any materials extending forward from a front face, Hornstein did not obviate Plaintiff's claims." *Id*. J&G discounts APE's argument in its claim construction brief as being different from the argument made to the Patent Office at the time of the rejection. In its claim construction brief, J&G argues, APE is taking "a very different view . . . , [t]hat is, the eccentric weight portion does not just extend forward from the front face as stated in the specification and to the Patent Office during prosecution, but also extends rearward sharing a common volume with the gear portion." *Id.*

Further J&G points to Reexamination Control No. 90/007,337 for U.S. Patent No 5,355,964 File History—September 14, 2006 Reply to Office Action, page 9

(Attached as Exhibit B ('Ex. B')), an additional portion of the file history, that J&G argues includes APE's "argument that a cavity or aperture by itself cannot be an 'eccentric weight portion.'" *Id*. "Again, it is only after the prosecution has closed that Plaintiff is attempting to recapture this 'structure.'" *Id.*

APE addresses J&G's file history arguments in its Claim Construction Reply Brief, Doc. 31, making the point that "prosecution history estoppel does not modify the plain and ordinary meaning of the claim terms." Doc. 31, at 12. APE begins by stating the standard for argument-based estoppel. "To invoke argument-based estoppel, the prosecution history must evince a 'clear and unmistakable surrender of subject matter.'" *Eagle Comtronics, Inc. v. Arrow Communication Labs*., Inc., 305 F.3d 1303, 1316 (Fed. Cir. 1999) (*citing Pharmacia v. Upjohn Co. v. Mylan Pharmaceuticals, Inc*., 170 F.3d 1373, 1377 (Fed. Cir. 1999). APE argues that the standard cannot be met in this case because neither was the argument based on the issue of the asserted estoppel (*citing Eagle Comtronics*, 305 F.3d at 1316 and *AquaTex Industries, Inc. v. Techniche Solutions* 419 F.3d 1374, 383 (Fed. Cir. 2005)), nor was the statement more than a mere clarification of the examiner's mistake. APE further points out, "[w]here a patentee disputes an examiner's statement on the record, and makes no amendment based on the examiner's statement, such statement usually [will] not be construed as a basis for argument-based prosecution history estoppel." Doc. 31, at 13, *quoting Dow Chemical Co. v. Sumitomo Chemical Co*., 257 F.3d 1364, 1382 (Fed. Cir. 2001).

APE explains that during the reexamination by the Patent Office, the examiner rejected most of the patent's claims, including each of the independent claims, 1, 6, 11, and 16 as anticipated, under 35 U.S.C. Sec. 102(b) by Hornstein '514. The

examiner believed that every element of the claim was found in Hornstein '514 because a "'claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.' M. P. E. P. Sec. 2131 (Rev. 6, Sept 2007)", quoting *Verdegaal Bros. v. Union Oil of California*, 814 F.2d 628, 631 (Fed. Cir. 1989)." Doc. 31 at 14. APE responded to the rejection by arguing that not all of the elements were present in the Hornstein '514 Patent, making three alternative arguments. If any one of the three arguments were successful, the section 102 rejection would be overcome. APE sets out the three arguments made to the parent office, which it admits may have been "inartfully" made, but were made "without the intent to surrender subject matter." Doc. 31, at 14. The arguments were that Hornstein '514:

> 1) did not have an eccentric weight portion into which an insert could be inserted; 2) if the weighted inserts placed within the rotor of Hornstein '514 was considered to be the eccentric weight portion, then the eccentric weight portion was not integral with the cylindrical gear portion; and 3) if the weighted inserts placed within the rotor of Hornstein '514 was considered to be the eccentric weight portion, then the eccentric weight portion and the cylindrical gear portion were not of a first metal, but of different metals.

Id.

APE argues that the first argument points out that the eccentric weight portion moves the center of gravity of the counterweight radially away from its rotational axis and that the claimed invention had an eccentric weight portion before weighted inserts were inserted, in contrast to Hornstein '514, which disclosed a non-eccentric rotor, that is, one without eccentric moment, that became eccentric only when a weighted insert was inserted into the rotor. That weighted insert became "the eccentric weight portion

because it was the only weight contributing to the eccentric moment of the device." Doc 31 at 14-15, *referencing* Doc 27, Exhibit B at 4-5.

The second argument[7] made to the patent office concerned the weighted inserts of Hornstein '514, which, if construed to be the eccentric weight portion element discussed above, were not "integral" with the cylindrical gear portion. Rather, the weighted inserts were "a separate element added to the rotor" Doc. 27, Exhibit B, at 6 "and did not have the integral, one piece-nature of the eccentric weight portion of the claimed invention. Doc 31 at 15. APE explains that

> Perhaps unartfully, the patentee was arguing that the weighted inserts of Hornstein '514 could not be both the eccentric weight portion that is integral with the gear portion and also be the "solid insert member" of the claims that is positioned within the eccentric weight portion. The weighted inserts of Hornstein could not be both positionable and also have the integral, one-piece-nature of the eccentric weight portion.

Id.

APE characterizes the third argument as "corollary to the second argument." Again, "if the weighted inserts of Hornstein '514 were construed to be the eccentric weight portion, then the counterweight was not made of a first metal. The weighted inserts of Hornstein '514 were made of a heavy metal that differed from the metal of the rotor. The counterweight could not be made of a "first metal" if the weighted inserts that were required to make the rotor eccentric were made of a different metal. *Id*.

The Court finds that, concerning the disputed claim term, "eccentric weight portion," when the file history is considered in its entirety there is nothing contained therein that reveals APE's arguments in the prosecution history relinquished

[7] The second and third arguments are more relevant to the disputed claim term "integral," but are placed with the first argument so that all three arguments may be viewed in context.

subject matter. "[A] competitor would [not] reasonably believe that the applicant has surrendered the relevant subject matter." *Pharmacia*, 170 F.3d at 1377. Accordingly, the Court finds that the ordinary and customary meaning of "eccentric weight portion" must be used, and, as such, APE's construction is adopted. "Eccentric weight portion" is construed to mean, "that portion of the counterweight that contributes to the eccentric moment of the counterweight. The portion is part of the whole counterweight, but need not be a separate component piece or part."

b. Integral

Claim 1 states "said counterweight having a cylindrical gear portion and an eccentric weight portion *integral* with said cylindrical gear portion." Patent '964, col. 9, ll 38-40 (emphasis added). APE contends that "integral" means "composed of portions, parts, or pieces that together constitute the whole." J&G contends that the term "integral" should be understood as meaning "cast of one-piece." J&G's construction is based less upon the ordinary and customary meaning of the word, whose dictionary definition lists a number of alternatives[8], than upon its arguments 1) that claim differentiation illustrates its construction of the disputed term is the correct one (Doc. 27, at 21); 2) "integral" and "connected to" are used in the same independent claims to indicate different relationships between the cylindrical gear portion and the eccentric weight portion (Doc 27, at 21-22); 3) APE disavows a multi-part counterweight in the specification (Doc 27, at 22-23); and 4) the file history, previously discussed with

[8] Reference to Webster's New Collegiate Dictionary (1975) at page 600 reveals, excluding the definitions of the term within the field of mathematics, the following definitions, "*adj* **1 a** : essential to completeness : CONSTITUENT. . . **c** formed as a unit with another part **2** : composed of integral parts : INTEGRATED: **3** : lacking nothing essential : ENTIRE."

reference to "eccentric weight portion," defines a one-piece counterweight (Doc 27, at 23-24). *Cf.* pages 15 -17 of this opinion.

In examining the claim language, APE also invokes "claim differentiation," which holds that "each claim of a patent constitutes a separate invention and gives rise to separate rights." *Kustom Signals, Inc. v. Applied Concepts, Inc*., 995 F. Supp. 1229, 1234 (D. Kan 1998), *aff'd*, 264 F.3d 1326 (Fed. Cir. 2001). Thus, although reference may be made to other claims in the same patent to determine the intended meaning of a disputed term in a claim, limitations from other claims may not be read into an independent claim. *Id.* APE points out that independent claim 16 recites "an eccentric weight portion connected to said cylindrical gear portion," and argues that this phrase "may suggest a two-piece counterweight where two pieces are 'connected to' each other. Doc 26, at 12. On the other hand, claim 19, which depends from claim 16, recites the "eccentric weight portion is integral with said cylindrical gear portion." *Id.* APE's point is that under the differentiation of claim concept claims 16 and 19 differ in "scope and are directed to a two-piece counterweight that can also be integral," thus negating "the notion that 'integral' necessarily connotes a 'one-piece' counterweight." *Id.*

Under the same differentiation of claims concept APE argues that "claim 19 recites that the first metal of which the gear portion and the eccentric weight portion are made is cast steel," thus implying that "the first metal of claims 1, 6, and 11 need not be a cast steel. Certainly, if the patentee had intended for the term 'integral' to be limited to a cast 'one-piece' counterweight, the patentee could have recited language that would have done so." *Id.*

J&G counters APE's claim differentiation arguments with its own. It argues that APE, although correctly stating the rule of claim differentiation, does not follow it because, pursuant to 35 U.S.C. 112(4), the dependent claim, 19, must narrow the scope of the independent claim 16.

> Therefore, by statute, "integral" must further narrow or limit the "connected to" language for claim differentiation to properly apply. Thus it naturally follows that "connected to" means a "two-piece" counterweight. Thus, despite Plaintiff's contention, claim differentiation actually illustrates that 'integral' means formed or cast of one piece.

Doc 27, at 21

APE refutes J&G's argument of claim differentiation in footnote 10 of its claim construction reply brief in which APE points out that claim 19 is narrower than claim 16, not because "'integral' must further narrow or limit the 'connected to' language," but "because the claim recites the first metal as cast steel and the second metal as tungsten." Doc 31, at 16, footnote 10.

APE begins its argument for its construction of the term "integral" by pointing out that "if the cylindrical gear portion and the eccentric weight portion share common structure," as APE described in its construction of "eccentric weight portion," then it goes without saying that "the eccentric weight portion is integral with the cylindrical gear portion. That is true whether the counterweight is a one-piece unit or comprised of several parts secured together." Doc 27, at 11.

J&G argues, however, that "[i]ndependent claims 1, 6, and 11 recite both the terms "integral" and "connected to" in the claim language. As an example[9], J&G references claim 1's use of "integral" in the description of "the relationship between the

[9] Claims 6 and 11 also use "connected to" to describe the relationship between the driving means and the counterweight.

eccentric weight portion and the cylindrical gear portion." Doc 27, at 21. Claim 1 uses "connected to" in the description of "the relationship of the driving means to the counterweight." Doc 27, at 21-22. APE maintains that the term "connected to" in claim 1 "refers specifically to separate items . . . that are joined together," (Doc 26 at 16), but J&G argues, never addresses why, if it intended to cover a two-piece counterweight, it used "integral" and not "connected to" in claims 1, 6, 11 when describing the relationship between the cylindrical gear portion and eccentric weight portion. J&G maintains, the claim language itself indicates "that the term 'connected to' in claims 1, 6, and 11, was selected to refer to two distinct components, and the term 'integral' was selected to refer to a one-piece counterweight." Doc. 27 at 22. Essentially, J&G's position is that the if the cylindrical gear portion and the eccentric weight portion are formed or cast of one piece into a counterweight, the patentee used the term "integral" to describe their working relationship, but if the cylindrical gear portion and the eccentric weight portion are two or more pieces put together into a counterweight, then, the term "connected to" is used to describe their working relationship. This construction does not, however, follow from the language of the claims themselves, and this court finds that J&G's construction of the disputed claim term "integral" is an effort to convince the Court to redraft the claims to include unjustified limitations. *Cf. Process Control Corp. v. Hyreclaim Corp.*, 190 F.3d 1350, 1357 (Fed. Cir. 1999).

J&G does not dispute that APE's statement in its opening claim construction brief (Doc. 26, at 12) that "In the industry and as described in the specification, counterweights were/are known where the gear portion and the eccentric portion are either two-piece or unitarily formed," *citing* '964 patent, col. 1, line 39 to col.

2, line 9. *Cf*. Doc. 27, at 22. APE states, without apparent contradiction by J&E, that the language of the claims does not require that the counterweight be cast integral or as a single unit, but J&G argues, that because APE is critical of two-piece assemblies in the specification, it has disavowed a multi-part counterweight. *Cf. Astrazeneca v. Mut. Pharm. Co*., 384 F.3d 1333, 1340 (Fed. Cir. 2004).

APE counters with its argument that J&G is relying upon a statement made in the Background of the Invention part of the '964 Patent, but has taken the statement out of context. Column 1, lines 39-51 of the '964 Patent discusses the disadvantages of both two-piece and one-piece vibratory devices. In order "to establish a specification disclaimer that surrenders subject matter from the scope of the claims" (Doc 31 at 10) it must be shown that the patentee intended "to deviate from the ordinary and accustomed meaning of a claim by including in the specification expressions of manifest exclusion or restriction, representing a clear disavowal of claim scope." *Teleflex, Inc. v. Ficosa North America Corp*, 299 F.3d 1313,1325 (Fed Cir. 2002). Discussion in the background section of the patent of the disadvantages of a two piece device does not disavow the coverage by the patent claims of a two-piece device certainly when the background section also discusses the disadvantages of a one piece device.

Finally we return to the prosecution history of the patent, specifically to Reexamination Control No. 90/007,337, for U.S. Patent No. 5,355,964 File History, Reply to Office Action, June 6, 2006. Doc. 27, Exhibit A. F&G argues that the file history demonstrates that "integral" should be construed to mean "formed or cast of one-piece. Doc. 27, at 23. In the reexamination APE argued that the '964 patent was distinguishable from the prior art Hornstein patent "because the independent claims

recited a further limitation of an eccentric weight portion that is integral with said cylindrical gear portion." APE argued:

> In other words, the claims recite that the counterweight has "a cylindrical gear portion and an eccentric weight portion" and that these two components are "integral"—i.e., **they are simply components of a 'one-piece' counterweight**. . . . This requirement of the integral—i.e., one-piece—nature of the eccentric weight portion is not disclosed by Hornstein.
> [Doc 27] Exhibit A at 6 (emphasis added)

Doc 27 at 23

J&G argues further that APE's position in the reexamination was "that this 'integral' limitation was distinguishable to the eccentric weights taught by the prior art because in the prior art reference those weights were added (or removed) to create an eccentric moment." *Id.* J&G interprets this to mean that "the eccentric weight portion of the '964 patent was not added or removed from the counterweight because it was 'integrally formed' with the cylindrical gear portion." *Id.* J&E posits that "if the eccentric weight portion could be added to the gear portion (i.e., a separate piece) then it would not be the 'one-piece' counterweight that the patentee argued for in the file history." *Id.* J&E concludes that this language found in the prosecution history binds APE to the construction that "integral" means formed or cast of one-piece. *Hockerson-Halberstad,* 222 F3d at 956.

APE responds with the argument that J&G has once again pulled an isolated statement in the prosecution history out of context, and that "an examination of the prosecution history as a whole will demonstrate that this argument is misplaced." Doc 31, at 13. The reader is now referred to pages 15- 17 of this opinion that discuss the

second and third arguments made by APE to the Patent Office, distinguishing the '964 patent from Hornstein.

In the Office Action mailed August 18, 2006 (Doc. 26, Exhibit C. [Reexamination Control No. 90/007,337 For U.S. Patent No. 5,355,964 File History Office Action Dated August 18, 2006]) the examiner responded to the Reply to Office Action in Reexamination submitted by APE June 6, 2006. In that Office Action the examiner rejected APE's characterization in the June Reply to Office Action of the term "integral":

> Nothing in the specification of the subject patent states that "integral" means "one-piece." Thus, this term must be given its broadest reasonable interpretation.
>
> In *In re Larson*, 144 U.S.P.Q. 347 (CCPA 1965), the court agreed with the construction of the term "integral" such that it read on several parts rigidly secured together as a single unit. *Id*. At 349.
>
> . . .Thus, whether "integral" is defined as "one-piece" or several parts rigidly secured together as a single unit, it does not read on the structure of Hornstein. . . .

Exhibit C to Plaintiff's Opening Claim Construction Brief, Doc. 26-4 at p. 11.

APE maintains that "[a]lthough the examiner agreed that Hornstein '514 '[did] not teach an eccentric weight portion integral with a cylindrical gear portion,' the examiner disagreed with the 'one-piece' characterization of the term 'integral' and applied a definition for integral as one-piece or several parts rigidly secured together as a single unit." Doc.31, at 16, *citing* Doc. 26, Exhibit C at 9-11. Because APE acquiesced in the definition set out by the examiner for the remainder of the prosecution, that is the definition that should prevail for the disputed claim term "integral." APE asks the Court to view the prosecution as a whole and agree that "one skilled in the art or a competitor

could not reasonably believe that the patentee had surrendered the relevant subject matter. *Pharmacia*, 170 F.3d at 1377. The claims were not amended; the examiner rejected a definition set forth in an argument, and the patentee acquiesced in the rejection and embraced the definition. The Court does not find J&G's counter arguments found on pages 23 and 24 of its Reply Brief (Doc. 27) persuasive and agrees with APE that there was no clear and unmistakable surrender of the subject matter; the patentee has not limited the term "integral" to mean "formed or cast of one-piece." The Court adopts the plaintiff's construction of the term "integral." "Integral is construed to mean "composed of portions, parts, or pieces that together constitute the whole. The portions act together to function as the counterweight."

c. Insert-Receiving Area.

The term "insert-receiving area" appears in asserted claims 1, 3, 6, 11, and 16 and in unasserted claims 4, 15, 21, 22, 24, and 27, and is used consistently throughout these claims. The term's use in claim 1 is representative:

> A vibratory assembly for imparting a vibratory force to a pile, comprising:
> a housing having at least one counterweight receiving means;
> a counterweight rotatably carried in said receiving means for rotation about a rotational axis, said counterweight having a cylindrical gear portion and an eccentric weight portion integral with said cylindrical gear portion, said eccentric weight portion having at least one **insert-receiving area** formed therein, said counterweight being made of a first metal;
> a solid insert member securely positioned in one of said at least one **insert-receiving areas** said solid insert member being made of a second metal having a specific gravity greater than the specific gravity of said first metal, and a melting point temperature of 328 degrees C. or greater; and
> at least one driving means operatively connected to said counterweight and adapted to rotate said counterweight about its rotational axis.

Doc. 26, Exhibit A, '964 Patent, col. 9, ll 33-53. (emphasis added)

The insert receiving area in the '964 patent allows a heavier high-melting point metal such as tungsten to be inserted into the counterweight in order to increase the eccentric moment, and, hence, vibratory force, without bulking up the device impractically. The claims (1, 6, 11, 16) describe the eccentric weight portion as having at least one "insert-receiving area," but do not describe the cylindrical gear portion as having an insert-receiving area. J&G's position is that the invention only claims that the inserts run through the structure extending forward from the gear structure, which it has argued is the "eccentric weight portion." J&G concludes that "the plain language of the claim limits the insert-receiving area to the eccentric weight portion of the counterweight and excludes an insert receiving area from the cylindrical gear portion." Doc. 27 at 18. APE's position is that because the eccentric weight portion can share volume with the cylindrical gear portion, claiming the insert-receiving area for only the eccentric weight portion does not prevent the insert from running through the entire counterweight. APE argues that there is no such limitation of the insert receiving area to the eccentric weight portion of the counterweight nor exclusion of an insert receiving area from the cylindrical gear portion of the counterweight. APE cites the use in the patent of the "open-ended term 'comprising' in transitioning from the preamble to the body of the claim." Doc 31, at 6. Because, APE argues, "the term 'comprising' has been construed to mean 'including the following elements *but not excluding others*,' Faber, *Landis on Mechanics of Patent Claim Drafting*, Sec. 2:5 (5th ed. July 2008) (Emphasis added); M.P.E.P. Sec. 2111.03 (Rev. 6, Sept. 2007)," additional unrecited elements are not excluded from the scope of the claim. Doc 31, at 6. The claims do not explicitly limit the insert receiving area to the eccentric weight portion, nor do the claims explicitly exclude insert-receiving

areas from the cylindrical gear portion. Relying on the plain language and ordinary meaning of the claim terms, the Court finds that "insert-receiving area" means "a region of the eccentric weight portion that is capable of receiving an insert, as opposed to receiving material being poured into the region."

d. Connected To

Claim 16 states "an eccentric weight portion *connected to* said cylindrical gear portion at a position radially outward of the axis of said cylindrical gear portion." '964 Patent, col. 11, ll 13-15. APE contends that the common and ordinary meaning of "connected to" is "joined together, united or linked." J&G construes the term to mean "formed of one-piece and specifically excludes bolting as the '964 patent teaches that prior art having bolted counterweights are not sufficiently durable and the '964 patent does not provide any other methods of 'connected to' other than casting from one-piece." Doc 27 at 25.

APE first argues that other claims in the patent, 1, 6, 11, use the term "connected to" in the plain and ordinary sense of "separate items. . . that are joined together." Doc 26, at 16. J&G agrees, but points out that the use of "connected to" in this sense is not disputed in those claims and, further, in each of the three instances, the term "connected to" is modified by the adverb "operatively," which is not used in claim 16. J&G argues that, although the use of a term in one claim may shed light on its meaning in another claim, the terms must be used in a similar context. This is not the case in the '964 patent. J&G again argues that "connected to" in claim 16 cannot mean a two-piece assembly because "in the Reexamination of the '964 Patent, patentee argued away from a two-piece counterweight having an eccentric weight portion that attached to

a cylindrical gear portion. Exhibit A, at 6." Doc. 27 at 27. The Court has rejected this argument as not persuasive. *Cf.* pages 23-24 of this Memorandum on Claim Construction.

In addition J&G argues that APE "disavowed a bolted, two-piece assembly in the specification and cannot now claim that 'connected to' includes what was previously disavowed. *Cf.* '964 Patent, col. 1, ll. 41-45." Doc. 27 at 27. The cited language of the patent is found in the "Background of the Invention" section of the patent. After describing the prior art as including "a vibratory assembly with counterweights having a solid eccentric weight bolted to a portion of a cylindrical gear," the cited language reads, "These bolted counterweights are not sufficiently durable, because the bolts have a very undesirable tendency to break under the large stress loads generated during rotation counterweights." '964 Patent, col. 1, ll 39-45. As pointed out before, at page 20-21 of this opinion, the Background of the Invention section distinguishes the vibratory devices known in the industry and points out the disadvantages of both two-piece and one-piece vibratory devices. '964 Patent, col. 1, ll 39-51, Doc 26, Exhibit A, at 6. Although J&G argues that the characterization of bolted counterweights as "not sufficiently durable," expresses exclusion of bolted counterweights, the statement is an expression of a problem to be solved and does not state or imply an express disavowal of two-piece assemblies. A specification disclaimer that operates to surrender subject matter from the scope of a claim must demonstrate an "intent to deviate from the ordinary and accustomed meaning of a claim term by including in the specification expressions of manifest exclusion or restriction, representing a clear disavowal of claim scope." *Teleflex,* 299 F.3d at 1325. It is

interesting to note that all five of the previous opinions on the disputed term "connected to" rejected the argument J&G makes here that the term excludes "bolting." *cf.* footnote 4 above. All four opinions accept APE's construction of the term "connected to," as meaning "joined together, united or linked." This Court makes the same construction. The term "connected to" is construed to mean "joined together, united or linked."

Conclusion.

Accordingly the disputed terms of the '964 Patent are construed as follows:

1. The term "eccentric weight portion" is construed to mean, "that portion of the counterweight that contributes to the eccentric moment of the counterweight. The portion is part of the whole counterweight, but need not be a separate component piece or part."

2. The term "integral" is construed to mean "composed of portions, parts, or pieces that together constitute the whole. The portions act together to function as the counterweight."

3. The term "insert-receiving area" is construed to mean "a region of the eccentric weight portion that is capable of receiving an insert, as opposed to receiving material being poured into the region."

4. The term "connected to" is construed to mean "joined together, united or linked."

It is so ORDERED.

SIGNED at Houston, Texas, this 9th day of March, 2010.

MELINDA HARMON
UNITED STATES DISTRICT JUDGE